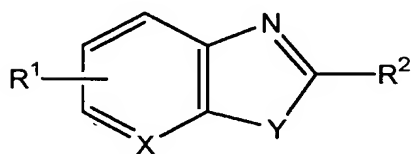


WHAT IS CLAIMED IS:

1. A method for inhibiting 5-lipoxygenase in a subject, comprising administering a compound of formula (I) or a pharmaceutically acceptable salt thereof to the subject in an amount effective for the inhibition of 5-lipoxygenase:



(I)

wherein

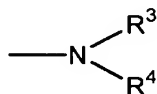
10 X is CH or N;

Y is S or O;

R¹ is H, OH, halogen, C₁₋₆ alkyl, nitro, cyano, amino, di-C₁₋₆ alkylamino, C₁₋₆ alkoxy, C₁₋₆ hydroxyalkyl or C₁₋₆ alkylcarbonyl; and

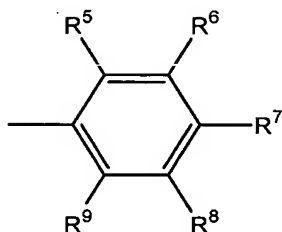
R² is

15 (i)



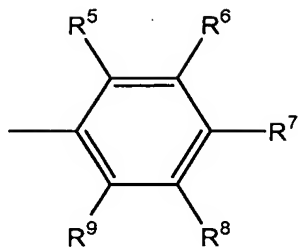
wherein R³ is H or C₁₋₆ alkyl;

R⁴ is



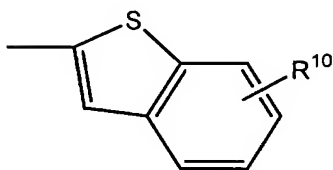
- 20 wherein R⁵, R⁶, R⁷, R⁸ and R⁹ are independently H, OH, halogen, C₁₋₆ alkyl, C₁₋₆ haloalkyl, nitro, cyano, amino, di-C₁₋₆ alkylamino, mercapto, C₁₋₆ mercaptoalkyl, halogen-substituted C₁₋₆ mercaptoalkyl, phenylazo, C₁₋₆ alkylphenylazo, C₁₋₆ alkylcarbonyl, C₁₋₆ alkoxy or C₁₋₆ hydroxyalkyl,

(ii)



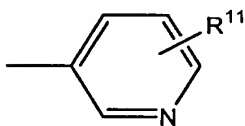
wherein R^5 , R^6 , R^7 , R^8 and R^9 are as defined in (i),

5 (iii)



wherein R^{10} is H or C_{1-6} alkyl,

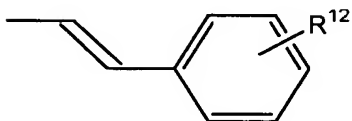
(iv)



10

wherein R^{11} is H, C_{1-6} alkyl, halogen, mercapto or C_{1-6} mercaptoalkyl, or

(v)



15 wherein R^{12} is H, OH, halogen, C_{1-6} alkyl, nitro, cyano, amino, di- C_{1-6} alkylamino, C_{1-6} alkylcarbonyl, C_{1-6} alkoxy or C_{1-6} hydroxyalkyl.

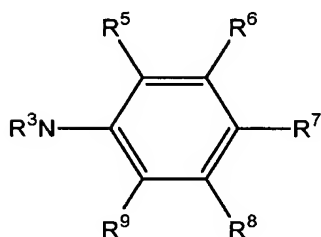
2. The method of claim 1, which is used for preventing or treating a leukotriene-related disease selected from the group consisting of: asthma,
 20 pertussis, psoriasis, rheumatic arthritis, arthritis, inflammatory bowel disease,

cystic fibrosis, acute/chronic bronchitis, gout, sepsis, cardiac myoischemia, cardiac anaphylaxis, cerebrovascular convulsion, ischemia and allergic rhinitis.

3. The method of claim 2, wherein the disease is asthma.

5

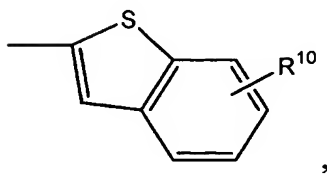
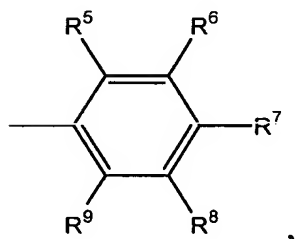
4. The method of claim 1, wherein R^2 is

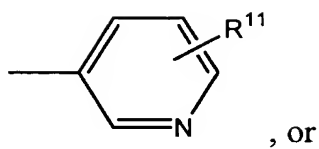


10 wherein R^3 , R^5 , R^6 , R^7 , R^8 and R^9 are as defined in claim 1.

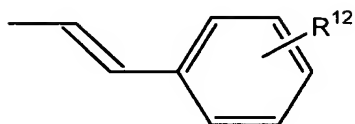
5. The method of claim 4, wherein R^1 is H, halogen, C_{1-6} alkyl or nitro; and R^5 , R^6 , R^7 , R^8 and R^9 are independently H, halogen, C_{1-6} alkyl or phenylazo.

15 6. The method of claim 1, wherein R^2 is



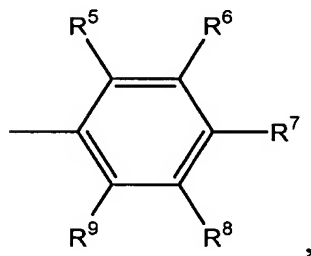


, or



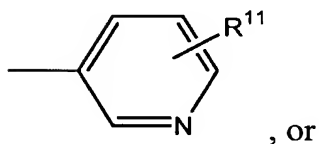
5 wherein R⁵, R⁶, R⁷, R⁸, R⁹, R¹⁰, R¹¹ and R¹² are as defined in claim 1.

7. The method of claim 6, wherein R¹ is H or C₁₋₆ alkyl; and R² is

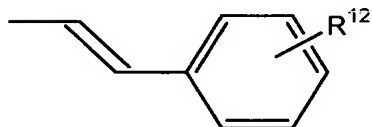


,

10

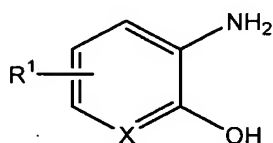


, or

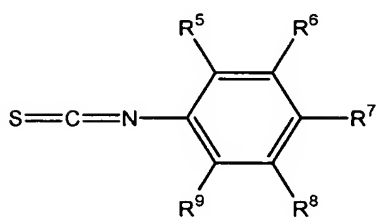


wherein R⁵, R⁶, R⁷, R⁸ and R⁹ are, independently, H, halogen, C₁₋₆ alkyl, C₁₋₆ haloalkyl, nitro, cyano, amino, di-C₁₋₆ alkylamino, mercapto, C₁₋₆ mercaptoalkyl, halogen-substituted C₁₋₆ mercaptoalkyl or C₁₋₆ alkoxy;
 15 R¹¹ is as defined in claim 1; and
 R¹² is H, halogen or C₁₋₆ alkyl.

8. A method for preparing a compound of formula (I) comprising the steps of: (a) reacting a compound of formula (II) with a compound of formula (III) in an organic solvent to synthesize a thiourea intermediate of formula (IV); and (b) reacting the thiourea intermediate of formula (IV) with an acid to obtain a compound of formula (Ia) or (Ib):

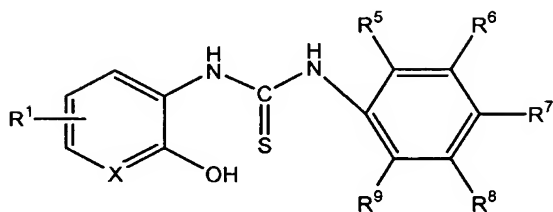


(II)

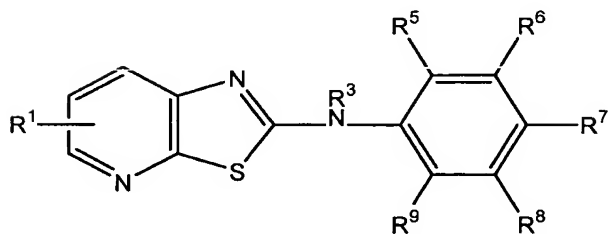


(III)

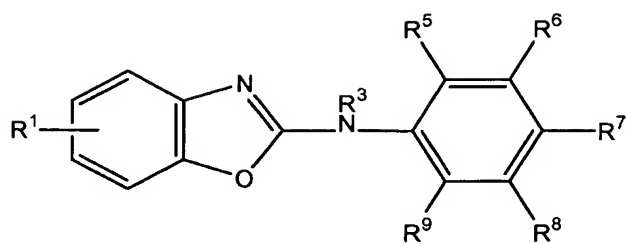
10



(IV)



(Ia)



(Ib)

wherein R¹, R³, R⁵, R⁶, R⁷, R⁸ and R⁹ are as defined in claim 1.

- 5 9. The method of claim 8, wherein the acid in step (b) is selected from the group consisting of trifluoroacetic acid, phosphoric acid, sulfuric acid, hydrochloric acid and nitric acid.